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***MISSION***

***The Faculty and staff of Chadwick R-1 Schools in partnership with parents and the community, will establish high standards of learning and high expectations for achievement while providing comprehensive guidance for success****.*

*Subject: Algebra 1*

*Grade Level: 9-12*

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| ***August/September:***  Relationships Between Quantities ***4 Weeks*** |

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| **ESSENTIAL MEASURABLE LEARNING OBJECTIVES** | **CROSSWALK TO STANDARDS** |
| **CLEs** | **PS****(Standards of Mathematical Practice)** | **CCSS** | **MATH** | **DOK****(per GLE/CLE)** |
| 1. Students will choose appropriate units of measure to represent context of a problem
 | M.2.D.A1M.2.E.A1 | 1.71.6  | N-Q.1 | MP8 MP2 | 2  |
| 1. Students will define appropriate quantities for the purpose of descriptive modeling.
 |  |  | N-Q.2 |  |  |
| 1. Students will select and use units of measure to accurately model a given real world scenario
 | N.1.C.A1 | 1.10 1.6  | N-Q.3 | MP4MP8MP2 | 2 |
| 1. Students will convert units of measure using dimensional analysis
 | N.3.D.A1A.2.A.A1A.2.B.A1 | 1.7 1.6  | N-Q.1 | MP7MP8MP2 | 2 |
| 1. Students will apply rules of significant digits and scientific notation
 |  |  | N-Q.1 | MP7MP8MP2 | 2 |
| 1. Students will use precision of initial measurements to determine the level of precision with which answers can be reported
 | N.3.D.A1 | 3.2  | N-Q.3 | MP1MP2MP6 | 3 |
| 1. Students will interpret parts of an expression such as terms, factors, coefficients.
 | A.2.A.A1 | 3.3 | A-SSE.1a | MP2MP8MP3MP7 | 2 |
| 1. Students will interpret complicated expressions by viewing one or more of their parts as a single entity.
 | A.2.A.A1 | 3.3 | A-SSE.1b | MP2MP8MP3MP7 |  3 |
| 1. Interpret and apply rules for order of operations
 | A.2.A.A1 |  | A-SSE.1b | MP2MP8MP3MP7 |  3 |

Multiple Assessments given during the unit.

Unit Assessment given at end of unit.

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| ***September/October/November:***  Reasoning with Equations ***10 Weeks*** |

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| **ESSENTIAL MEASURABLE LEARNING OBJECTIVES** | **CROSSWALK TO STANDARDS** |
| **GLEs/CLEs** | **PS****(Standards of Mathematical Practice)** | **CCSS** | **MATH** | **DOK****(per GLE/CLE)** |
| 1. Students will create equations and inequalities in one variable and use them to solve problems
 | A.2.A.A1 | 3.3  | A-CED.1 | MP3 | 3  |
| 1. Students will create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.
 | A.2.A.A1A.3.A.A1G.4.B.A1  | 3.3 1.6 3.3 | A-CED.2 | MP3MP8MP3 | 323 |
| 1. Students will represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or non-viable options in a modeling context.
 | A.2.D.A1A.3.A.A1G.4.B.A1 | 1.6 1.7 1.8  | A-CED.3 | MP8MP3MP6MP7MP6 | 223 |
| 1. Students will rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations
 | A.2.B.A1 | 3.2  | A-CED.4 | MP1 | 2 |
| 1. Students will explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.
 | A.2.B.A1A.2.C.A1 | 3.23.2 | A-REI.1 | MP1MP1 | 2 1  |
| 1. Students will solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.
 | A.2.A.A1 | 3.3 | A-REI.3 | MP3 | 3 |

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| ***December:***  1st Semester Completion ***2 Weeks*** |

Multiple Assessments given during the unit.

Unit Assessment given at end of unit.

These two weeks are used to complete any objectives that have not been covered and to prepare for the semester finals.

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| ***January:***  Sequences and Their Related Functions ***4 Weeks***  |

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| **ESSENTIAL MEASURABLE LEARNING OBJECTIVES**  | **CROSSWALK TO STANDARDS** |
| **GLEs/CLEs** | **PS** | **CCSS** | **MATH** | **DOK** |
| 1. Students will identify arithmetic and geometric sequences.
 | A.4.A.A1A.1.E.A1A.4.A.A1 | 1.61.61.6 | F-LE.1bF-LE.1c | MP8MP8MP8MP1 | 323 |
| 1. Students will compare sequences and other functions in terms of their domain.
 | A.1.B.A1 | 1.6 | F-IF.3 | MP8MP1 | 2 |
| 1. Students will write recursive and explicit functions to model situations.
 | A.1.B.A1A.2.A.A1A.1.B.A1A.1.C.A1A.2.A.A1A.1.B.A1A.1.C.A1A.2.A.A1 | 1.63.31.61.63.31.61.63.3 | F-BF.1aF-BF.2F-LE.2 | MP8MP3MP8MP8MP3MP8MP8MP3MP1MP7 | 23233233 |
| 1. Students will translate between explicit and recursive notation.
 | A.1.B.A1A.1.C.A1A.2.A.A1 | 1.61.63.3 | F-BF.2 | MP8MP8MP3MP1MP7 | 233 |
| 1. Students will interpret the parameters of linear and exponential functions in terms of a context.
 | A.4.A.A1 | 1.6 | F-LE.5 | MP8MP1 | 3 |

Multiple Assessments given during the unit.

Unit Assessment given at end of unit.

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| ESSENTIAL MEASURABLE LEARNING OBJECTIVES  | CROSSWALK TO STANDARDS |
| GLEs/CLEs | PS | CCSS | MATH | DOK |
| 1. Students will solve problems that involve quadratic equations.
 | A.2.A.A1A.2.B.A1 | 3.33.2 | A-SSE.1A-SSE.2 | MP3MP1 | 32 |
| 1. Students will use properties of mathematics to alter the structure of an expression and equation.
 | A.2.A.A1A.2.B.A1 | 3.33.2 | A-SSE.1A-SSE.2 | MP3MP1 | 32 |
| 1. Students will determine the factors, x-intercepts, and zeros of a graph and use the Zero-Product Property to solve quadratic equations.
 | A.2.B.A1 | 3.2 | A-SSE.3aA-SSE.3bA-SSE.3c | MP3MP1 | 2 |

Multiple Assessments given during the unit.

Unit Assessment given at end of unit.

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| ***February:***  Solving Quadratic Equations ***4 Weeks*** |

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| ***March/April: Exponential Functions***  ***6 Weeks*** |

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| **ESSENTIAL MEASURABLE LEARNING OBJECTIVES**  | **CROSSWALK TO STANDARDS** |
| **GLEs/CLEs** | **PS** | **CCSS** | **MATH** | **DOK** |
| 1. **Students will recognize exponential functions represented numerically in tables, graphically, symbolically, or by verbal descriptions.**
 | **A.1.E.A1****A.4.A.A1****A.1.C.A1****G.4.B.A1****A.4.A.A1****G.4.B.A1****A.1.C.A1****A.1.D.A1** | **1.6****1.6****1.6****3.3****1.6****3.3****1.6****1.6****1.6** | **F-LE.1c****F-LE.3****F-IF.6****F-IF.7e****F-IF.9** | **MP8****MP8****MP8****MP3****MP8****MP3****MP8****MP8****MP8** | **2****3****3****3****3****3****2****3****2** |
| 1. **Students will solve exponential equations and systems of equations involving exponentials.**
 | **A.1.C.A1****A.2.D.A1****A.4.A.A1****G.4.B.A1****A.1.B.A1****A.1.C.A1****A.2.A.A1** | **1.6****1.6****1.6****3.3****1.6****1.6****3.3** | **A-REI.10****A-REI.11****F-LE.2** | **MP8****MP8****MP8****MP3****MP8****MP8****MP3** | **3****2****3****3****2****3****3** |
| 1. **Students will construct and interpret functions in terms of a context.**
 | **A.1.C.A1****A.1.D.A1****A.1.E.A1****A.4.A.A1****G.4.B.A1****A.1.B.A1****A.2.A.A1****A.1.E.A1****G.4.B.A1****A.4.A.A1** | **1.6****1.6****1.6****1.6****3.3****1.6****3.3****1.6****3.3****1.6** | **F-IF.4****F-BF.1a****F-BF.3** **F-LE.5** | **MP8****MP8****MP8****MP8****MP3****MP8****MP3****MP8****MP3****MP8** | **3****2****2****3****3****2****3****2****3****3** |

Multiple Assessments given during the unit.

Unit Assessment given at end of unit.

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| ***May:***  2nd Semester Completion ***2 Weeks*** |

These weeks are used to complete any objectives that have not been covered and to prepare for the semester finals.